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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,585	07/22/2003	Hirotoshi Ohno	25579	6540

20529 7590 01/14/2008

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EXAMINER	
FLETCHER, JAMES A	
ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
01/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/623,585	OHNO ET AL.	
	Examiner	Art Unit	
	James A. Fletcher	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/03 8/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

New Art Unit

1. Please include the new Art Unit 2621 in the caption or heading of any written or facsimile communication submitted after this Office Action because the examiner, who was assigned to Art Unit 2616, has been assigned to new Art Unit 2621. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al (JP 2003-346431), and in further view of Brody et al (6,718,801)

Regarding claim 1, Sako et al disclose a digital information signal recording method comprising the steps of:

- converting a synchronizing signal, control signal, and input data word of p bits into a code word of q bits based on a coding table (Paragraph 0022 "The output data of a multiplexer 11 are supplied to the eight-to-fourteen modulation machine 12, and it is changed into the data symbol whose 8-bit symbol is a 14-channel bit according to a translation table");

- continuously arranging, in a state of a plurality of frames, modulation signals of a unit of one frame (Paragraph 0039 "The Maine data outputted from the frame sink detecting element 25 are supplied to the EFM demodulator 27, and receive processing of an EFM recovery" while strictly keeping a predetermined run length limitation rule and an error correction code to constitute data for copy prevention (Paragraph 0042 "the maximum time amount width of face (time amount width of face from which the number of zero between 1 and 1 of a record signal serves as max) Tmax fulfills the regulation (it is hereafter called run length limit conditions suitably) of EFM which is ten or less pieces"); and
- recording the data for copy prevention and a p-q modulated digital information signal on a recording medium (Paragraph 0068 "When sub-code cutting tools are '74h' and '7Fh', CD is manufactured using the record signal with which the pattern of data '92h' was repeated as data which continue further using data '95h' or 'B5h.'"),

Sako et al do not explicitly state that the coding is NRZI. The Examiner takes official notice that Non-Return-to-Zero-Inverted data signaling is notoriously well known to those of ordinary skill in the art, and that it would have been obvious to modify Sako et al to disclose NRZI data coding.

Sako et al disclose a method of preventing copies of a data recording in a satisfactory manner, but do not explicitly state copying an error correction code values to another recording medium.

Brody et al teach the copying of error correction code values to another record medium (Col 13, lines 40-51 "a copy-protected audio compact disc containing a plurality of symbols representing audio data samples of an audio signal, and including latent noise which does not interfere with the playback of the audio signal from the audio compact disc on an ordinary audio player, but which interferes with the unauthorized copying of the audio compact disc on an ordinary CD recorder and with the playback of an unauthorized copy of the audio compact disc made on an ordinary CD recorder, the copy-protected audio compact disc including at least one erroneous symbol that does not correspond to the audio signal, and wherein the at least one erroneous symbol is contained within a disabled error-correction codeword"), making copying of the data unsatisfactory.

As taught by Brody et al, copying error correction data intended to make copies of a data recording unsatisfactory is well known, and protects the author's intellectual property.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sako et al in order to include copying of error-correction data to the copying medium.

Regarding claim 2, Sako et al disclose a digital information signal recording method wherein the string of code words of the data for copy prevention after the copy is coded so that DSV control fails at a reproduction time of the other recording medium, when the reproduction signal of the data for copy prevention obtained by correcting an error by the error correction code beforehand set to the same value as that of the error

correction code at the copy time is copied on the other recording medium (Paragraph 0010 "recording the record signal chosen so that the accumulation value of DSV might be made to increase on a record medium, so that a possibility of barring playback of normal data is produced").

Regarding claim 3, Sako et al disclose a digital information signal recording method wherein the string of code words of the data for copy prevention after the copy is coded on the other recording medium so that a DSV value is largely biased toward a minus side over the plurality of frames (Paragraph 0044 "What decreases DSV is chosen as a connection bit actually used among three connection bits"), and thereafter the DSV value is largely biased toward a plus side over the plurality of frames (Paragraph 0010 "It is the data-logging medium characterized by recording the record signal chosen so that the accumulation value of DSV might be made to increase, so that a possibility of barring playback of normal data is produced"), and this is alternately repeated, and the DSV control accordingly fails at the reproduction time of the other recording medium, when the reproduction signal of the data for copy prevention obtained by correcting an error by the error correction code beforehand set to the same value as that of the error correction code at the copy time is copied on the other recording medium (Paragraph 0014 "when the data recorded on this disk are reproduced to CD-R etc., at the time of playback of the CD-R concerned, the accumulation value of DSV in a specific data pattern part will exceed the fixed range, playback actuation will fail, and the duplicate of CD will be prevented as a result at it").

Regarding claim 4, Sako et al disclose a digital information signal recording method wherein the string of code words of the data for copy prevention is beforehand coded so that the DSV control can be performed as usual at a time when the string of code words of the data for copy prevention is error-corrected by the error correction code beforehand set to the same value as that of the error correction code at the copy time (Paragraph 0014 "a special sub-code is added to the data of an above-mentioned specific data pattern, and EFM is performed. In EFM, it outputs as a record signal so that the accumulation value of DSV may fall within a fixed range, and a disk is manufactured").

Regarding claim 5, Sako et al disclose a recording medium on which the data for copy prevention and p-q modulated digital information signal are recorded (Paragraph 0068 "When sub-code cutting tools are '74h' and '7Fh', CD is manufactured using the record signal with which the pattern of data '92h' was repeated as data which continue further using data '95h' or 'B5h.').

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF
6 January 2008

JOHN MILLER
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